United States Department of the Interior

NATIONAL PARK SERVICE
Glacier National Park
West Glacier, Montana 59936

IN REPLY REFER TO:

L76-GLAC-04-083, 04-106
AUG 1 0 2004

Dear Friends:

Enclosed are two Environmental Assessments: 1) Construction of New Hay Storage and Feeding Facility, and 2) Carpenter Shop Addition. These projects were proposed by Glacier National Park in July 2004 and a scoping letter was sent to you at that time.

Presently, hay for all park-owned horse operations is stored in a small room upstairs in the West Glacier barn. The existing storage area has poor ventilation and dusty conditions that have caused acute respiratory effects for many of the handlers. These conditions, in conjunction with mouse populations present in the delivered hay and in the barn, result in a high risk of Hantavirus. Furthermore, the hay storage and feeding system requires that the barn personnel repeatedly lift and lower 70 pound hay bales into and out of the upper story of the barn. This system has resulted in back injuries for the employees. One Environmental Assessment analyzes a proposal to construct an open-sided feeding and storage structure for hay that would allow the hay to be machine stacked in five-ton increments and reduce health risks. The proposed location for this facility is within an already disturbed area, on the bench just below the existing barn and inside the current corral.

Currently, the park's Sign Shop is housed within three different buildings, all of which are in need of rehabilitation and do not meet the needs of today's sign making operation. In addition, the park's Paint Shop building does not allow for use of all equipment because of health code violations. The building cannot be rehabilitated to accommodate a spray booth without a major change in the building's structure. One Environmental Assessment analyzes a proposal to construct an addition to the Carpenter Shop which would allow for a reorganization and consolidation of these three facilities.

The resources that would be affected by these proposals have been analyzed in the Environmental Assessments. These resources include historic buildings and structures, park operations, and public health and safety.

These Environmental Assessments are available to the public for review for 30 days. Comments are due by September 20, 2004. Please write to Superintendent, Glacier National Park Attn: Hay Storage Facility EA (or Carpenter Shop Addition EA), West Glacier, Montana 59936. Or you can email comments to: glac_public_comments@nps.gov. Please note the title of the project in the subject line.

Our practice is to make comments, including names and home addresses of respondents available for public review during regular business hours. Individual respondents may request that we withhold their home address from the record, which we will honor to the extent allowable by law. There also may be circumstances in which we would withhold from the record a respondent's identity as allowable by law. **If you wish us to withhold your name and/or address, you must state this prominently at the beginning of your comment.** However, we

will not consider anonymous comments. We will make all submissions from organizations or businesses and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public inspection in their entirety.

Thank you very much for your continued support and interest in Glacier National Park.

Sincerely,

Michael O. Holm
Superintendent

Enclosure (2)

National Park Service
U.S. Department of the Interior

Glacier National Park
Montana

Construction of New Hay Storage and Feeding Facility

Environmental Assessment

August 2004

Environmental Assessment

Construction of New Hay Storage and Feeding Facility

Glacier National Park • Montana

Summary

Presently, hay for all park-owned horse operations is stored in a small room upstairs in the West Glacier barn. The existing storage area has poor ventilation and dusty conditions that have caused acute respiratory effects for many of the handlers. These conditions, in conjunction with mouse populations present in the delivered hay and in the barn, result in a high risk of Hantavirus. Furthermore, the hay storage and feeding system requires that the barn personnel repeatedly lift and lower 70 lb hay bales into and out of the upper story of the barn. This system has resulted in back injuries for the employees. The existing room only allows the park to store 4-6 weeks worth of hay at one time. The proposed project is to construct an open-sided feeding and storage structure that would allow the hay to be machine stacked in five-ton increments and reduce health risks. The overall footprint would be 64' x 52' and would be large enough to store an entire year's supply of hay. The proposed location for this facility is within an already disturbed area, on the bench just below the existing barn and inside the current corral.

Two alternatives are analyzed: a No Action Alternative which would maintain the current hay storage operations and the Preferred Alternative. The Preferred Alternative would be to construct a new facility for hay storage, loading, and feeding. The following Summary Table lists the effects each alternative would have on the resources that would be affected by the proposed project.

The No Action Alternative would have no impact on visual resources; moderate, long-term adverse impacts to public health and safety; and minor, long-term, adverse impacts to park operations. If the Preferred Alternative is implemented there would be moderate, long-term adverse impacts to visual resources at Apgar Lookout and a negligible impact on visual resources at all other visitor use areas. This alternative would also result in moderate, long-term beneficial impacts to public health and safety and minor, long-term, beneficial impacts to park operations.

Public Comment

If you wish to comment on the environmental assessment, you may mail comments to the name and address below. This environmental assessment will be on public review for 30 days. Please note that names and addresses of people who comment become part of the public record. **If you wish us to withhold your name and/or address, you must state this prominently at the beginning of your comment.** We will make all submissions from organizations, businesses, and

from individuals identifying themselves as representatives or officials of organizations or businesses available for public inspection in their entirety.

Superintendent
Attn: Hay Storage Facility EA
Glacier National Park
West Glacier, MT 59936

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Introduction

Background

Glacier National Park is located on the Canadian border in the northwestern section of Montana. The park is in the northern Rockies, and contains the rugged mountains of the Continental Divide. Together with Canada's Waterton National Park, it forms the Waterton-Glacier International Peace Park, and is a World Heritage Site. Outstanding natural and cultural resources are found in both parks.

Its primary mission is the preservation of natural and cultural resources, ensuring that current and future generations have the opportunity to experience, enjoy, and understand the legacy of Waterton-Glacier International Peace Park.

The purpose of Glacier National Park is to:

- preserve and protect natural and cultural resources unimpaired for future generations (1916 Organic Act);
- provide opportunities to experience, understand, appreciate, and enjoy Glacier National Park consistent with the preservation of resources in a state of nature (1910 legislation establishing Glacier National Park); and
- celebrate the on-going peace, friendship, and goodwill among nations, recognizing the need for cooperation in a world of shared resources (1932 International Peace Park legislation).

Glacier's significance is explained relative to its natural and cultural heritage:

- Glacier's scenery dramatically illustrates an exceptionally long geological history and the many geological processes associated with mountain building and glaciation;
- Glacier offers relatively-accessible, spectacular scenery and an increasingly rare primitive wilderness experience;
- Glacier is at the core of the "Crown of the Continent" ecosystem, one of the most ecologically intact areas remaining in the temperate regions of the world;
- Glacier's cultural resources chronicle the history of human activities (prehistoric people, Native Americans, early explorers, railroad development, and modern use and visitation) and show that people have long placed high value on the area's natural features; and
- Waterton-Glacier is the world's first international peace park.

The proposed project would occur at the park's horse barn near the West Entrance to the park. The location proposed for the new facility is currently used as part of a large horse corral and is adjacent to the existing horse barn.

Purpose and Need

In Glacier National Park, stock is used to support much of the work conducted in the backcountry. Some programs that regularly receive supplies or assistance from stock operations include: trail crews, backcountry rangers, lookouts, revegetation crews, and maintenance of backcountry structures. The park maintains 55-60 head of stock in a given year. Currently, the hayloft of the West Glacier barn is the primary storage and dispersal point for hay storage. Hay arrives at the barn in five-ton stacks of 70 lb. bales and is lifted by conveyor up from the delivery truck and hand stacked. It must then be hand loaded from the barn down to feeding areas or onto a flatbed truck for delivery to other parts of the park.

This project is a proactive measure that targets both health and safety issues and park efficiency. The proposed hay storage structure would reduce the number of times bales are handled, thereby reducing recurrent back injuries. Glacier National Park has one of the highest rates of injury in the National Park Service and back injuries are among the most frequent. In addition, the proposed structure would be large enough to store an entire year's supply of hay and would eliminate a frequent problem of wet weather damaging recently delivered hay before it can be stored or transported elsewhere in the park.

Poor ventilation and dusty conditions within the existing barn also present health hazards. Hay handlers have experienced acute respiratory problems from the enclosed conditions. In addition, the presence of mice and their waste within arriving hay and the barn present a potential health hazard. The open-air design of a new hay storage area would reduce respiratory problems and the risk of contracting air-borne viruses such as Hantavirus.

Public Involvement (Scoping)

Scoping is an early and open process to determine the breadth of environmental issues and alternatives to be addressed in an environmental assessment. Glacier National Park conducted both internal scoping with appropriate National Park Service (NPS) staff and external scoping with the public and interested and affected groups and agencies.

The interdisciplinary process of internal scoping defined the purpose and need, identified potential actions to address the need, determined what the likely issues and impact topics would be, and identified the relationship, if any, of the proposed action to other planning efforts at the park.

Public scoping was conducted for 28 days starting July 13, 2004. On this date, letters were sent to the park's mailing list for EAs, and various federal, state, and local agencies, including the U.S. Fish and Wildlife Service (USFWS) and the Blackfeet and Confederated Salish and Kootenai Indian Tribes. A press release was issued on July 20, 2004 announcing scoping.

Three email comments were received during scoping. One email supported the proposed project to reduce the exposure of employees to Hanta virus. The State Historic Preservation Office stated that they had no immediate concerns regarding the project, but they would wait to see drawings and photos before commenting further. The Tribal Preservation Office of the Confederated Salish and Kootenai Tribes had no concerns regarding the project as long as it occurred within existing disturbed areas.

Relationship of the Proposed Action to Previous Planning Efforts

The proposed action is consistent with the objectives of Glacier National Park's General Management Plan/Environmental Impact Statement and Record of Decision (1999). The area is within the visitor service zone of the Going-to-the-Sun Road Corridor according to the General Management Plan. Within this area:

> "Development, where permitted, would serve a broad range of visitor, concession, and park administrative needs. New or replacement development could occur. This area would be managed to retain its character and to accommodate current levels and types of uses. Use could increase, subject to analysis of resource impacts,

> infrastructure capacities, relationships to services provided outside the park, and other factors necessary to maintain the park's character."

The Proposed Action falls within these parameters and, consequently, is in conformance with the General Management Plan for Glacier National Park.

Impact Topics

Resources that may be affected by the project alternatives were identified by National Park Service staff and other federal and state agencies. Impact topics were derived from these resources to ensure that alternatives were compared on the basis of the most relevant topics. The following impact topics were identified on the basis of federal laws, regulations, orders, and National Park Service Management Policies (2001), and input received during scoping. Three impact topics were identified for analysis in this EA. All other impact topics were dismissed. A brief rationale for the selection of these impact topics is given below, as well as the rationale for dismissing the rest of the impact topics from further consideration.

Visual Resources

The proposed project may be visible from visitor use areas including some locations outside of the visitor service zone. Therefore, impacts to visual resources are analyzed.

Public Health and Safety

Glacier National Park has one of the highest accident rates throughout the National Park Service. Back injuries are among the most common, and management has recently been taking substantial steps to address the park's accident rate and improve safety conditions for employees. The system of stacking hay in a small enclosed area, and manually moving the 70 lb. bales to a truck or feeding station has resulted in several back and other injuries in recent years. The park also maintains many structures that are unused for long periods during the year, especially during the winter months. Many of these structures are older buildings that contain rodent and other wildlife populations. Rodent populations that live within the barn and the delivered hay can create a health hazard for employees. This project would improve public health and safety; therefore it is discussed as an impact topic.

Park Operations

The proposed project would change the hay operation and use of the barn near West Glacier. Therefore, park operations are discussed as an impact topic.

Topics Eliminated from Detailed Study

NEPA, CEQ regulations, and NPS procedures for implementing NEPA specify that an EA should address only those resource areas potentially subject to impacts. In addition, the level of analysis should be commensurate with the anticipated level of environmental impact. The following resources would have minor impacts or less from the proposed project they will not be discussed beyond this section.

Topography, Geology, and Soils

According to the National Park Service's 2001 Management Policies, the National Park Service will preserve and protect geologic resources and features from adverse effects of human activity, while allowing natural processes to continue (NPS 2000B). These policies also state that the National Park Service will strive to understand and preserve the soil resources of park units and to prevent, to the extent possible, the unnatural erosion, physical removal, or contamination of the soil, or its contamination of other resources.

The proposed new hay storage facility would be constructed in a location that is currently used as a horse corral. Consequently, the soils are already compacted from horses and occasionally from vehicles. The new facility would include 12-inch wide support piers dug approximately three feet into the ground and a cement foundation that would require no more than six inches of excavation depending on the current slope of the site. No previously undisturbed soils would be impacted. Given that there are no significant topographic or geologic features or soils in the project area, and that the area has been previously disturbed, the proposed actions would result in negligible to minor, permanent adverse effects to topography, geology, and soils. Because these effects are minor or less in degree, this topic has been dismissed from further analysis in this document.

Vegetation

According to the National Park Service's 2001 Management Policies, the National Park Service strives to maintain all components and processes of naturally evolving park unit ecosystems, including the natural abundance, diversity, and ecological integrity of plants (NPS 2000B). There is currently no vegetation on the site proposed for the new building addition except for a few small (< 8 in. diameter) lodgepole pines that would need to be removed from just outside the fenceline of the corral to accommodate the new structure. No other vegetation is expected to be impacted. If any vegetation adjacent to the site were disturbed during construction, it would be revegetated with native plant species.

Wildlife

According to the National Park Service's 2001 Management Policies, the National Park Service strives to maintain all components and processes of naturally evolving park unit ecosystems, including the natural abundance, diversity, and ecological integrity of animals (NPS 2000B). Wildlife commonly found in the project area includes white-tailed deer, coyotes, ground squirrels, bats, mice, and many species of birds. There are also numerous insect species and an occasional black bear.

The project site has very little native vegetation and the presence of humans, human-related activities, stock, and structures have removed or displaced much of the native wildlife habitat in the project area. The construction would have no effect on the wildlife habitat in the immediate area of construction. During construction, noise would increase in the area which may disturb some wildlife in the immediate vicinity; however, this impact would be temporary and negligible. Because the effects to wildlife and wildlife habitat from the proposed project are minor or less in degree, this topic has been dismissed from further analysis in this document.

Special Status Species (Federal and State listed)

The Endangered Species Act of 1973 requires examination of impacts on all federally-listed threatened, endangered, and candidate species. Section 7 of the Endangered Species Act

requires all federal agencies to consult with the U.S. Fish and Wildlife Service (or designated representative) to ensure that any action authorized, funded, or carried out by the agency does not jeopardize the continued existence of listed species or critical habitats. In addition, the 2001 Management Policies and Director's Order 77 Natural Resources Management Guidelines require the National Park Service to examine the impacts on federal candidate species, as well as state-listed threatened, endangered, candidate, rare, declining, and sensitive species (NPS 2000B).

Further protection under the Migratory Bird Treaty Act makes it unlawful to pursue, hunt, kill, capture, possess, buy, sell, purchase, or barter any migratory bird, including the feathers or other parts, nests, eggs, or migratory bird products. In addition, this act serves to protect environmental conditions for migratory birds from pollution or other ecosystem degradations. Some migratory birds may be present in trees adjacent to the site, but the immediate project area contains little native vegetation for migratory birds. There are no known nesting sites in this area, and these lands are not vital for foraging or roosting. Construction-related noise could potentially disturb transient bird species, but these adverse impacts would be 1) temporary, lasting only as long as construction, and 2) negligible, because suitable habitat for transient birds is found throughout the region.

The project area is not known to be used by any federally-listed species or species of concern. Because no threatened, endangered, or other species of concern are known to occur in the project area, federal and state listed species were dismissed from further analysis.

Cultural Resources

The barn was constructed in 1963 and is not historic. No archeological resources were found during the following surveys of the area:

- Brian Reeves, Glacier National Park Archaeological Inventory and Assessment -- 1994 Field Season Final Report Part I: Inventory.
- James W. Mueller, Archeological Reconnaissance for Package #256 and PR/IP Project S40, Glacier National Park, 1982. Survey included area of existing barn, but not immediate area of proposed hay storage facility.
- Mark R. Guthrie, Cultural Resource Inventory of Specified Areas with Glacier National Park, Montana, 1978.

The area has been adequately surveyed, no identified and/or unevaluated resources exist, and the probability of discovering historic properties is highly unlikely. Only previously disturbed ground would be affected by the proposed project. However, if cultural resources are discovered during construction the project would be halted until the resources can be evaluated by an archeologist. The Blackfeet Tribal Business Council and the Confederated Salish and Kootenai Tribal Council have been contacted during scoping. The Confederated Salish and Kootenai Tribal Historic Preservation Department did not express any concerns with the project unless previously undisturbed ground was impacted. No response was received from the Blackfeet Tribe. Because there are no effects to cultural resources, this topic has been dismissed from further consideration.

For Section 106 purposes, the park will document a "no historic properties affected" finding in its annual report to the State Historic Preservation Office in accordance with the *Programmatic Agreement among the National Park Service (Glacier National Park), the Advisory Council on*

Historic Preservation, and the Montana State Historic Preservation Officer for Management of Historic Properties in Glacier National Park.

Water Resources

National Park Service policies require protection of water quality consistent with the Clean Water Act. The purpose of the Clean Water Act is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters". To enact this goal, the U.S. Army Corps of Engineers has been charged with evaluating federal actions that result in potential degradation of waters of the United States and issuing permits for actions consistent with the Clean Water Act. The U.S. Environmental Protection Agency also has responsibility for oversight and review of permits and actions, which affect waters of the United States.

The proposed project area does not contain surface waters, and is mostly dry, except for periodic runoff during storm events. Water quality, water quantity, drinking water, and aquatic resources are not expected to be affected by the project. The structure would be designed to shed water in an appropriate manner and would not increase erosion in the area. Because the project results in negligible effects to water resources, this topic has been dismissed from further consideration.

Wetlands

For regulatory purposes under the Clean Water Act, the term wetlands means "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

Executive Order 11990 Protection of Wetlands requires federal agencies to avoid, where possible, adversely impacting wetlands. Further, Section 404 of the Clean Water Act authorizes the U.S. Army Corps of Engineers to prohibit or regulate, through a permitting process, discharge or dredged or fill material or excavation within waters of the United States. National Park Service policies for wetlands as stated in 2001 Management Policies and Director's Order 77-1 Wetlands Protection, strive to prevent the loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands. In accordance with DO 77-1 Wetlands Protection, proposed actions that have the potential to adversely impact wetlands must be addressed in a Statement of Findings for wetlands. No wetlands are located in the project area (USFWS 2004, NPS files); therefore, a Statement of Findings for wetlands will not be prepared, and the impact topic of wetlands has been dismissed.

Wild and Scenic River

The Middle Fork of the Flathead River, which is approximately 1500 feet from the proposed project site is designated a Wild and Scenic River. However, the proposed project is located approximately 250 feet outside of the Wild and Scenic River corridors and this topic has been dismissed.

Floodplains

Executive Order 11988 Floodplain Management requires all federal agencies to avoid construction within the 100-year floodplain unless no other practicable alternative exists. The National Park Service under 2001 Management Policies and Director's Order 77-2 Floodplain

Management will strive to preserve floodplain values and minimize hazardous floodplain conditions. According to Director's Order 77-2 Floodplain Management, certain construction within a 100-year floodplain requires preparation of a Statement of Findings for floodplains. The location for the proposed project was not inundated by the 1964 flood (NPS 1981) which is considered a 500-year flood event. Therefore, it is not located within the 100-year floodplain. Therefore a Statement of Findings for floodplains will not be prepared, and the topic of floodplains has been dismissed.

Prime and Unique Farmlands

In 1980, the Council on Environmental Quality directed that Federal Agencies must assess the effects of their actions on farmland soils classified by the U.S. Department of Agriculture's Natural Resources Conservation Service as prime or unique. There are no "prime or unique farmlands" in Glacier National Park (NPS 1999a); therefore it was dismissed as an impact topic.

Proposed Wilderness

The proposed project would occur within the visitor service zone and is outside of the proposed wilderness areas of Glacier National Park. Views from the wilderness to the site of the proposed structure are discussed under the topic of visual resources. Therefore, wilderness will not be discussed further as a topic.

Air Quality

The Clean Air Act establishes specific programs that provide special protection for air resources and air quality related values associated with National Park Service units. Section 118 of the Clean Air Act requires a park unit to meet all federal, state, and local air pollution standards. Glacier National Park is classified as a mandatory Class I area under the Clean Air Act, where emissions of particulate matter and sulfur dioxide are to be restricted. The act gives the federal land manager the responsibility for protecting air quality and related values (i.e., including visibility, vegetation, wildlife, soils, water quality, cultural resources, recreational resources, and public health) in Class I lands from adverse air pollution impacts; and to consider, in consultation with EPA, whether proposed industrial facilities will have an adverse impact on these values. Federal land managers are also required to determine whether existing industrial sources of air pollution must be retrofitted to reduce impacts on Class I areas to acceptable levels.

Air quality is considered good in Glacier National Park. There are no major metropolitan areas within 125 miles of the park, and no regional smog typical of highly populated areas with a high amount of vehicle traffic. However, the Columbia Falls, Kalispell, and Whitefish areas, all just west of the park, currently do not attain national air quality standards for fine particulate matter (PM10). Consequently, Flathead County implements measures contained in a PM10 control plan to ensure ambient concentrations of PM10 do not exceed the National Ambient Air Quality Standards. Airborne particulate matter, including smoke from both natural and manmade fires and dust from unpaved roads, occasionally impairs visibility in the park.

Construction activities such as hauling materials and operating heavy equipment could result in temporary increases of vehicle exhaust and dust in the general project area. Any emissions from construction activities would be temporary and localized. Overall, the project could result in a negligible degradation of local air quality, and such effects would be temporary, lasting only as

long as construction. The Class I air quality designation would not be affected by the proposal. Therefore, air quality has been dismissed as an impact topic.

Natural Soundscapes

In accordance with 2001 Management Policies and Director's Order 47 Sound Preservation and Noise Management, an important component of the National Park Service's mission is the preservation of natural soundscapes associated with national park units (NPS 2000B). Natural soundscapes exist in the absence of human-caused sound. The natural ambient soundscape is the aggregate of all the natural sounds that occur in park units, together with the physical capacity for transmitting natural sounds. The frequencies, magnitudes, and durations of human-caused sound considered acceptable varies among National Park Service units as well as potentially throughout each park unit, being generally greater in developed areas and less in undeveloped areas.

The location for the proposed project is less than a mile from both Park Headquarters and the Apgar area; and it is located ½ mile from the main entrance road to the park. It is on the same road as the wastewater treatment plant. Existing sounds in this area are most often generated from vehicular traffic, helicopters, people, some wildlife such as birds, and wind. The proposed structure would be used strictly for storage and during feeding of horses. These activities would not increase noise levels and the building would not have electricity to run any form of machinery. Because the area already contains man-made noises, the long-term operation of the building is not expected to appreciably increase the noise levels in the general area.

During construction, human-caused sounds would likely increase due to construction activities, equipment, vehicular traffic, and construction crews. Any sounds generated from construction would be temporary, lasting only as long as the construction activity, and would have a negligible to minor adverse impact on visitors and employees. Therefore, the topic of soundscape management was dismissed as an impact topic.

Visitor Use/Experience

Visitors to Glacier National Park typically do not visit the spur road that the horse facilities are located on, and consequently, the visitor experience would not be changed. The view of the structure from trails or other sites will be discussed under the topic of visual resources. The proposed project would not increase safety hazards to visitors in the park. The project would have no effect on visitor use; and this topic was dismissed from further discussion.

Environmental Justice

Executive Order 12898 "General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," requires all federal agencies to identify and address disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations or communities. The proposed action would not have disproportionate health or environmental effects on minorities or low-income populations or communities as defined in the Environmental Protection Agency's Environmental Justice Guidance (1998). Therefore, environmental justice was dismissed as an impact topic in this document.

Socioeconomics

The proposed action would neither change local and regional land use nor appreciably impact local businesses or other agencies. The construction would be performed by park service employees so no new jobs would be created by the construction. There could be a negligible increase in revenue from purchasing needed materials; however, any increase in revenue would be temporary and negligible. Because the impacts to the socioeconomic environment would be negligible, this topic has been dismissed.

Alternatives Considered

No Action Alternative

The No Action Alternative describes the conditions that would continue to exist if the Proposed Action is not implemented. This alternative provides a baseline for evaluating the changes and related environmental impacts that would occur under the Proposed Action (Table 1). Under this alternative, no new hay storage facility would be constructed and the existing storage area within the barn would continue to be used. Hay would continue to be delivered on an as-needed basis. There would be no additional construction costs associated with the No Action Alternative.

Preferred Alternative (Proposed Action)

The National Park Service's preferred alternative and proposed undertaking for Section 106 compliance is to construct an open-sided hay storage and feeding structure that is 32' x 64' with an 18-foot ceiling (Figure 1). Along the sides of the storage area would be 10 foot wide feeding areas. The overall footprint would be 64' x 52'. This area would be large enough to store an entire year's worth of hay and allow park employees to deliver hay to other parts of the park without having to rely on the availability of the hay vendor or be subject to inclement weather. Under current operations, the hay is often dampened by wet weather before it can be stored properly or transported elsewhere in the park, occasionally resulting in spoiled hay that must be discarded.

The structure's width would have free-spanning trusses as a ceiling and be covered by metal roofing with a brown or dark green roof to blend in better with the vegetation. Half trusses would extend below the roof and would be attached to the sidewalls below the eaves of the main roof. Treated posts would be used for the framework. They would be set on concrete piers (approx. 32) that are drilled and poured approximately three feet below grade. A concrete floor would be poured throughout that would have no slope under the storage area and a slight outward slope under the feeding areas.

The location for this project is just below the existing West Glacier horse barn (Figure 1) and above the horse pasture. This area is currently part of the corral which would still have adequate space for the stock and would not require expansion. The design of the new structure would allow a mechanism on the delivery truck to load and unload hay without employees having to handle the 70-lb. bales. Trucks would access the new facility by an existing dirt road into the corral. An 8' high metal gate would be installed across the open front of the structure to keep deer and elk from accessing the hay. All flat work, including the foundation, would be constructed in the fall of 2004 and the structure would be built in the summer of 2005.

Presently, hay is stored in the upstairs of the barn and must be handled several times by employees prior to feeding or shipping, often resulting in injured backs for employees. The existing storage area also has poor ventilation and dusty conditions that have caused acute respiratory effects for many of the handlers. These conditions in conjunction with mouse populations present in the delivered hay and in the barn result in a high risk of Hantavirus. The open-air design of the new hay storage area and the ability for hay to be machine stacked in five-ton increments would reduce these health risks.

Mitigation for this project would include installing a brown or dark green roof and planting trees along the western edge of the structure. Immature lodgepole pines would be planted every five feet along the existing western fence line of the corral. Expecting 50% mortality, a tree would survive every 10 feet. These trees would require at least ten years before they would provide screening.

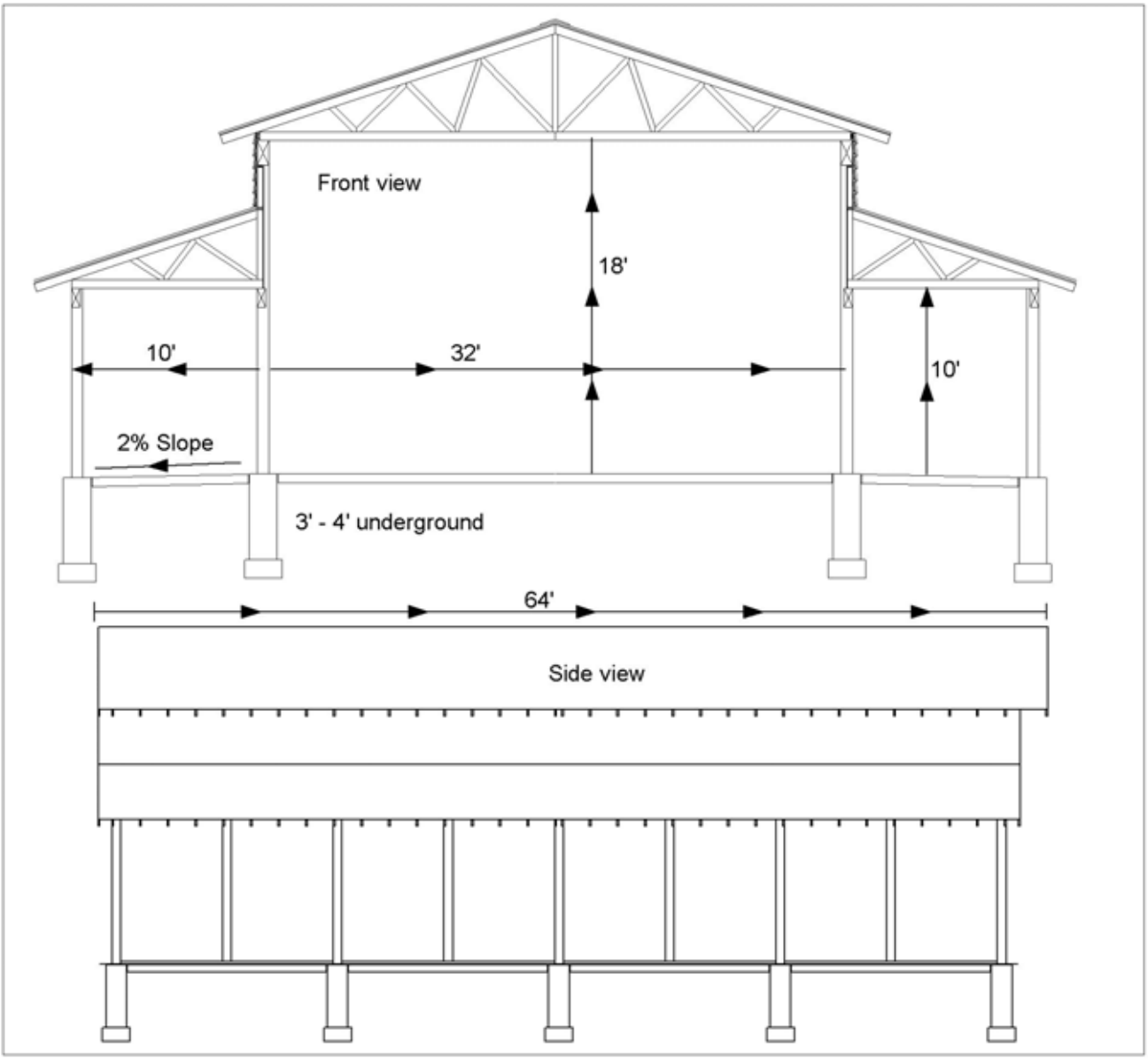
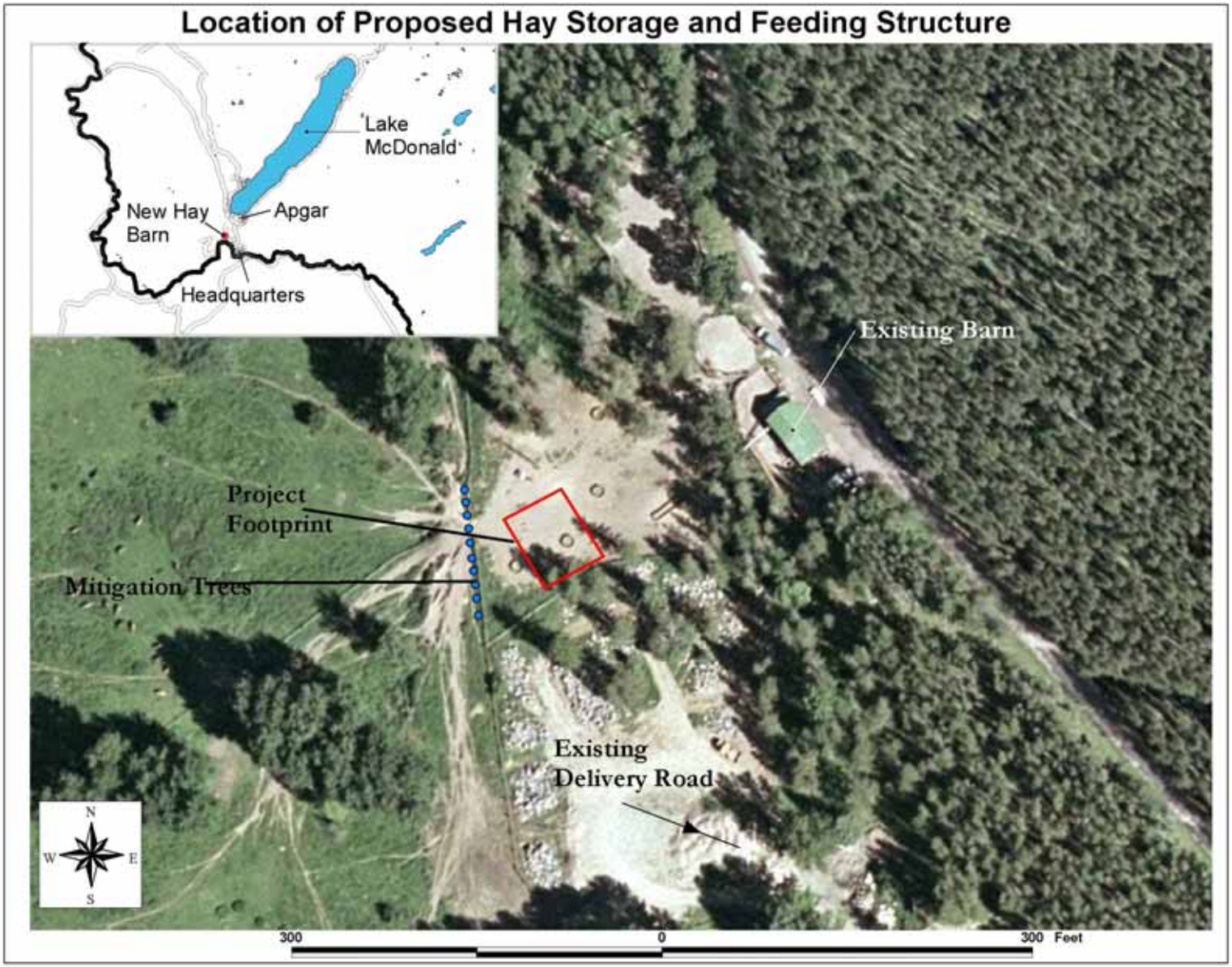


Figure 1. Layout and dimensions of proposed hay storage and feeding facility.



Map 1. Location of proposed hay storage and feeding structure at West Glacier horse barn.

Alternatives Considered But Eliminated

Two additional alternatives were considered, but were determined to be unfeasible. One alternative that was actually attempted was to stack the hay outside, next to the barn, and then cover the bales with tarps. Using this method, it was difficult to keep the hay dry without proper flooring and roofing, and it required considerable handling by employees. Consequently, it was determined that this alternative risked spoiling the hay and did not improve safety concerns related to handling the heavy bales. A second alternative was to purchase the hay but keep it stored at the vendor's facility. This was deemed unfeasible because of associated storage costs charged by the vendor and because of the inefficiency of relying on the vendor's availability to deliver the hay when it was needed.

The remainder of this document will only discuss and analyze the potential impacts from the Preferred Alternative and the No Action Alternative as these were the only two feasible alternatives identified. Table 1 provides a summary comparison of these two alternatives. Table 2 summarizes the effects of each alternative on the selected impact topics.

Table 1. Summary comparison of alternatives analyzed in this document.

Issue	No Action Alternative	Preferred Alternative
Size of hay storage area and loss of hay to spoiling.	Under current storage conditions, only 4-6 weeks worth of hay can be stored at any one time. Consequently, hay must be delivered several times a year. Often the hay is dampened by wet weather before it can be stored or transported elsewhere in the park, occasionally resulting in spoiled hay that must be discarded.	This alternative would provide enough storage space for all of the year's hay to be delivered at one time, thus reducing the incidences of spoilage.
Handling of hay bales by employees.	Hay bales must currently be handled multiple times prior to reaching the storage or feeding area.	Under this alternative, machinery on the delivery truck would be able to mechanically stack the hay bales in the storage area or for transport without requiring employee handling.
Safety concerns related to ventilation and rodents.	The current storage area is small and inadequately ventilated resulting in poor air circulation and risks of air-borne diseases.	The proposed storage area would be open-sided allowing for adequate ventilation.

Table 2. Summary comparison of effects on resources under the No Action and Preferred alternatives. Some resources may not be changed at all from current conditions and these topics have consequently been given a rating of "no effect".

Impact Topic	No Action Alternative	Preferred Alternative
Visual Resources	No effect	Moderate, long-term adverse effect at Apgar Lookout; long-term negligible effect on all other areas
Public Health and Safety	Moderate, long-term adverse effects	Moderate, long-term beneficial effects
Park Operations	Minor, long-term adverse effects	Minor, long-term beneficial effects

Environmentally Preferred Alternative

The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969 (NEPA), which is guided by the Council on Environmental Quality (CEQ). The CEQ provides direction that the "environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA Section 101":

1. fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. assure for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings;
3. attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
4. preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice;
5. achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and
6. enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

The Preferred Alternative would best fit criteria 2, 3, 5, and 6 by providing safer conditions for employees and reducing the number of hay delivery trips. The proposed project would use a previously disturbed area to provide a beneficial and more efficient means of managing the hay needed for park operations. The project does not conflict with, or address, criteria 1 and 4. It does not change environmental conditions since the site is already disturbed, nor does it impact cultural diversity. The No Action Alternative conflicts with criteria 2 and 3 by not providing for health and safety. It does not address criteria 1, 4, 5, and 6. Therefore, the Preferred Alternative is the environmentally preferred alternative.

Affected Environment

Visual Resources

The location of the proposed project is surrounded by forest in most directions, with one exception; to the west is an open pasture. McDonald Creek is approximately ¼ of a mile from

the site in this direction; however, there is a stand of trees between the creek and the pasture. Popular visitor use areas near the project include Apgar Visitor Center, Apgar Lookout, Middle Fork of the Flathead River, and Quarter-Circle Bridge. A GIS viewshed analysis was performed to determine if the proposed structure would be visible from any of these use areas (Figure 2) and the results are discussed in the Environmental Consequences section. The analysis is based strictly upon topography and does not take into account tree cover. Consequently, the results suggest that the structure would be visible from several nearby areas including Apgar Visitor Center and Quarter-Circle Bridge; however, trees would completely block the view of the structure from all locations within a similar elevation range. The only area that the structure would be visible from is Apgar Lookout.

Public Health and Safety

Current conditions for storing hay at the West Glacier horse barn present several health concerns for employees. The public is not affected. One problem is chronic back injuries resulting from loading and unloading 70-lb. hay bales into and out of the storage area. Another health issue is the poor ventilation within the existing horse barn. As hay is handled it releases dust which lingers in the stagnant air of the barn causing employees to cough to the point where they have to exit the building. Newly delivered hay and stored hay could also be contaminated with mouse waste that could potentially carry lethal Hantavirus. To avoid harboring the virus, mouse infested buildings must have adequate ventilation that will allow air circulation to dry and remove the airborne illness.

Park Operations

Currently, hay for park stock operations is stored upstairs in the West Glacier horse barn. The hay vendor makes several trips a year to deliver hay because there is only enough storage space to hold 4-6 weeks worth of hay at the barn. A substantial amount of manual moving of the hay is required to help unload/load the hay when a shipment arrives or when transport to horse facilities on the east side of the park is needed. Hay arrives at the barn in five-ton stacks of 70 lb. bales and is lifted by conveyor up from the delivery truck and hand stacked. It must then be hand loaded from the barn down to feeding areas or onto a flatbed truck for delivery to other parts of the park. Often the hay is dampened by wet weather before it can be stored or transported elsewhere in the park, occasionally resulting in spoiled hay that must be discarded.

Environmental Consequences

Methodology

The effects of each alternative are assessed for direct, indirect, and cumulative impacts on selected natural, cultural, and other resources. Potential impacts are described in terms of type (are the effects beneficial or adverse?), context (are the effects site-specific, local, or regional?), duration (are the effects short-term or long-term?), timing (is the project seasonally timed to avoid adverse effects?), and intensity (are the effects negligible, minor, moderate, or major?). Because definitions of intensity vary by impact topic, intensity definitions are provided for each impact topic analyzed in this EA.

Impairment of Park Resources or Values

National Park Service Management Policies (NPS 2000B) require analysis of potential effects to determine whether or not actions would impair park resources or values. The fundamental purpose of the National Park System, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. NPS managers must always seek ways to avoid, or to minimize to the greatest degree practicable, actions that would adversely affect park resources and values.

These laws give the National Park Service the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the National Park Service the management discretion to allow certain impacts within parks, that discretion is limited by the statutory requirement that the National Park Service must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise.

Each topic was analyzed to determine if impacts constituted an impairment to park resources and values. The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. An impact to any park resource or value may constitute an impairment. Impairment may result from NPS activities in managing the park, from visitor activities, or from activities undertaken by concessionaires, contractors, and others operating in the park. An impact would be more likely to constitute an impairment to the extent that it has a major or severe adverse effect upon a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant NPS planning documents.

Cumulative Impacts

The Council on Environmental Quality (CEQ) regulations, which implement the National Environmental Policy Act of 1969 (42 USC 4321 et seq.), require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts are considered for both the No Action and Preferred alternatives.

Cumulative impacts were determined by combining the impacts of the alternatives with other past, present, and reasonably foreseeable future actions. Therefore, it was necessary to identify other past, ongoing or future projects at Glacier National Park and, if applicable, the surrounding region. The following are past, present and reasonable foreseeable future actions that have and could occur in the vicinity of the project area:

- Rehabilitation of Lake McDonald/Park Headquarters wastewater treatment system (completed).
- Shop and Storage addition to the existing wastewater treatment plant building (proposed project). Expand existing WWTP building to provide maintenance and storage space for WWTP and utilities operations. Work would include gutting and refurbishing the existing building, constructing a 30'x70' expansion and storage garages.
- Upgrade to Apgar water system (completed).
- Installation of radio tower at wastewater treatment plant (proposed project).

Impact Analysis

Visual Resources

Intensity Level Definitions: Impacts to visual resources were assessed based on a viewshed analysis. The GIS viewshed analysis was performed to determine if the proposed structure would be visible from any of the nearby use areas (Figure 2). The analysis is based strictly upon topography and does not take into account tree cover. Consequently, the results suggest that the structure would be visible from several nearby areas including Apgar Visitor Center and Quarter-Circle Bridge; however, trees would completely block the view of the structure from all locations within a similar elevation range. The only area that the structure would be visible from is Apgar Lookout. The thresholds for this impact assessment are as follows:

> **Negligible**: There would be no perceptible change in views either from or to the project site.
>
> **Minor**: A change in aesthetics would occur and may be detectable but would not affect visitors or wildlife.
>
> **Moderate**: A detectable change in aesthetics would occur but mitigation to offset adverse effects would be simple and effective.
>
> **Major**: There would be a severe change in aesthetics that may be permanent and impact visitor experience or wildlife populations. Mitigation to offset effects is not assured.

No Action Alternative: Under this alternative, no new storage facility would be built so there would be no effect to visual resources.

Because there would be no major, adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation and proclamation of Glacier National Park; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning documents, there would be no impairment of the park's resources or values.

Preferred Alternative: The new structure would be visible from Apgar Lookout resulting in a minor, long-term, adverse impact of visual resources to individuals visiting this location. Mitigation to lessen this impact would include installing a brown or dark green roof with a matte finish to blend in better with the vegetation and planting trees along the western side of the structure. Immature lodgepole pines would be planted near the existing western fence line of the corral. These trees would take approximately ten years to mature to an age where they would block the view of the side of the structure. The roof would still be visible. There would be no effect on visual resources from all other locations.

Because there would be no major, adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation and proclamation of Glacier National Park; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning documents, there would be no impairment of the park's resources or values.

Cumulative Effects: Since no new building would be constructed, the No Action Alternative would not contribute to cumulative effects caused by other projects in the area. The upgraded wastewater treatment facility and a potential radio tower would increase manmade facilities visible from Apgar Lookout resulting in long-term, minor, adverse impacts to the viewshed.

The Preferred Alternative would result in adverse impacts to the viewshed in conjunction with the recently completed wastewater treatment plant rehabilitation. Completed in 2004, the rehabilitation included a new 60' x 100' building. Considering a potential new radio tower at the treatment plant and an expansion of an existing building, the proposed project would add another new building to this area visible from Apgar Lookout, resulting in long-term, moderate, adverse impacts.

Conclusion: The No Action Alternative would have no impacts on visual resources. The Preferred Alternative, with mitigation, would have a moderate, long-term adverse impact on the view from Apgar Lookout; from all other areas the impact would be negligible.

Public Health and Safety

Intensity Level Definitions: Impacts to public health and safety were assessed based upon the potential injuries each alternative could result in if implemented. The thresholds for this impact assessment are as follows:

> **Negligible**: Public health and safety would not be affected, or the effects would not be noticeable.
>
> **Minor**: The effect would be detectable, but would not have an appreciable effect on public health and safety.
>
> **Moderate**: The effects would be readily apparent, and would result in a substantial change in public health and safety in a manner noticeable to staff and the public.
>
> **Major**: The effects would be readily apparent, would result in a substantial change in public health and safety in a manner noticeable to staff and the public, and be markedly different from existing conditions.

No Action Alternative: Under this alternative, no changes to hay operations would be made and employees handling the hay would continue to be at risk of back strain, respiratory ailments, and Hantavirus. This would result in long-term, moderate, adverse effects to the health and safety of park employees.

Preferred Alternative: This alternative would considerably improve working conditions for employees of the horse barn. Hay would be loaded and unloaded using a mechanical device on the delivery truck. Employees would no longer lift and lower bales for hours at a time, thereby removing the risk of injury from this portion of the operation. Mechanical stacking would also allow workers to remain farther from the hay as it is unloaded, thus reducing respiratory problems. Stacking the hay in an open facility would greatly reduce the chances of contracting

Hantavirus. Overall, these improvements would provide long-term, moderate, beneficial impacts to the health and safety of park employees.

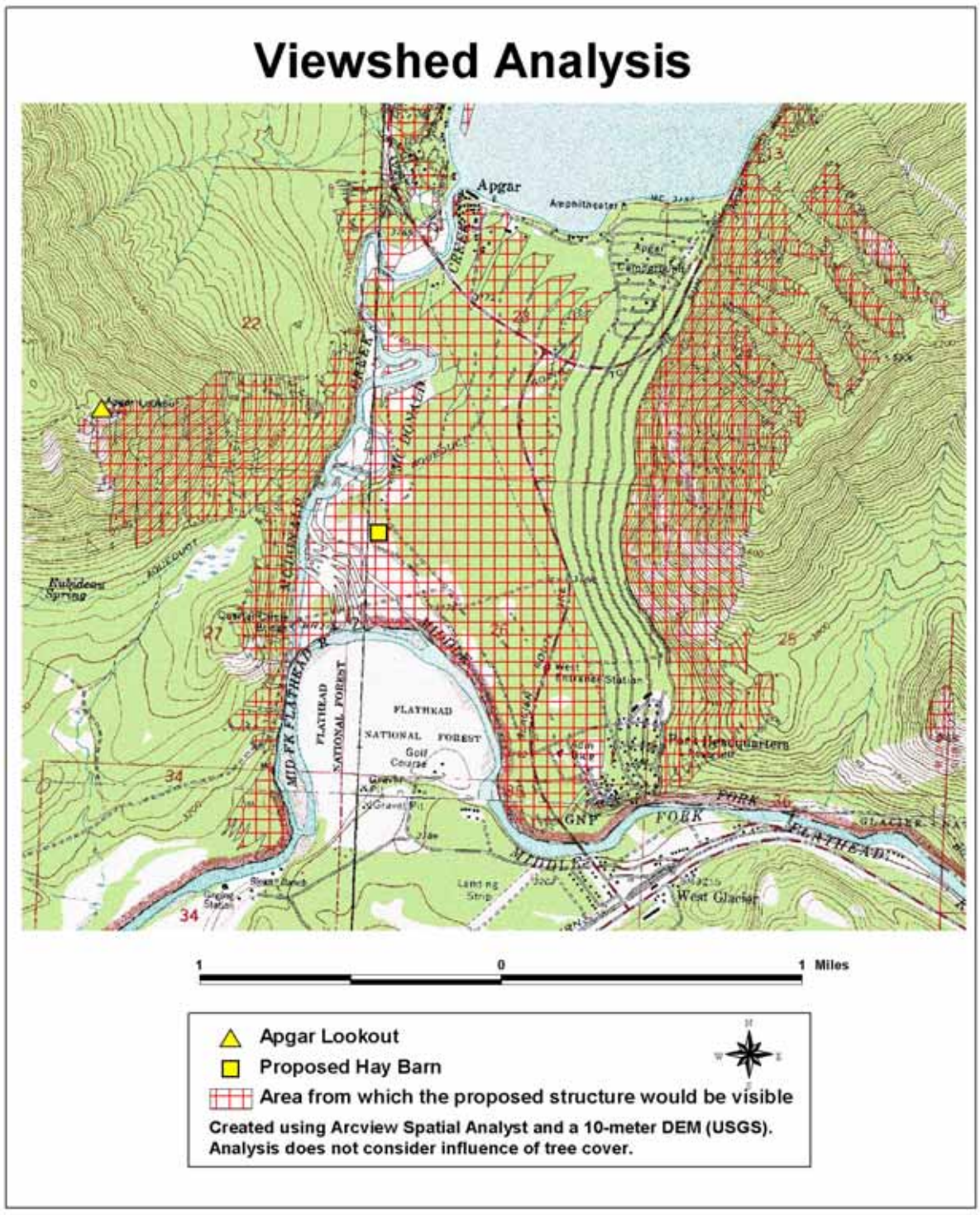


Figure 2. Viewshed analysis of proposed hay storage and feeding area.

Cumulative Effects: No other local projects would adversely affect human health and safety so there would be no cumulative impacts with the No Action Alterative. The proposed radio tower would improve human health and safety by enhancing park communications resulting in better response to emergencies. The Preferred Alternative in conjunction with this project would improve health and safety, especially of park employees, and result in long-term, moderate, beneficial impacts. No other local projects would change health and safety conditions in the area.

Conclusion: Under the No Action Alternative there would be moderate, long-term adverse impacts to public health and safety in the form of continued back and respiratory problems. The Preferred Alternative would have moderate, long-term beneficial impacts to the health and safety of park employees.

Park Operations

Intensity Level Definitions: Impacts to park operations were assessed based upon current conditions of resources, changes to current operating procedures, and current staffing levels. Thresholds for this impact assessment are as follows:

> **Negligible**: Park operations would not be affected, or the effects would not be noticeable.
>
> **Minor**: The effect would be detectable, but would not have an appreciable effect on park operations.
>
> **Moderate**: The effects would be readily apparent, and would result in a substantial change in park operations in a manner noticeable to staff and the public.
>
> **Major**: The effects would be readily apparent, would result in a substantial change in park operation in a manner noticeable to staff and the public, and be markedly different from existing operations.

No Action Alternative: When additional hay is needed in the park, arrangements must be made with the vendor for delivery and several employees must be available to help unload and load the hay. The hay must be stored or dispersed to other parts of the park before inclement weather substantially dampens the hay. These inefficient operations would not change under the No Action Alternative and would result in long-term, minor, adverse impacts to park operations.

Preferred Alternative: Park operations would be improved under this alternative by providing a storage area large enough to hold a year's worth of hay. This would allow park employees to deliver hay to other parts of the park without having to rely on the availability of the hay vendor or be subject to inclement weather. Hay loading and unloading would be simplified and require less manual handling, and feeding horses at the West Glacier barn would no longer require substantial handling of hay bales. These changes would probably not be noticeable to the public, only to park employees. Overall, the improvements would result in minor, long-term, beneficial effects to park operations.

Cumulative Effects: No other local projects would adversely impact park operations and consequently no cumulative impacts with the No Action Alternative are expected. The upgraded wastewater treatment facility and Apgar water lines, and the proposed radio tower and building expansion at the treatment plant would all improve park operations. In conjunction with the Preferred Alternative, these projects would result in long-term, moderate, beneficial impacts to local park operations.

Conclusion: The No Action Alternative would have a continued minor, long-term adverse effect on park operations in the form of inefficient hay storage and movement capabilities. The Preferred Alternative would have a minor, long-term beneficial effect on park operations by improving hay storage and handling procedures.

Consultation and Coordination

Agencies/ Tribes/ Organizations/ Individuals Contacted

The Blackfeet Tribe and the Confederated Salish and Kootenai Tribes were consulted on this project in accordance with legislation, regulations, and NPS policy concerning consultation with American Indian Governments, communities, and groups.

U.S. Fish and Wildlife Service

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List of Environmental Assessment Recipients

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Bill and Bob Lundgren
Burlington Northern Santa Fe Railroad
Chair, Flathead County Board of Commissioners
Coalition for Canyon Preservation
Confederated Salish and Kootenai Tribal Preservation Department
Conrad Burns, United States Senate
Dennis Rehberg, United States House of Representatives, Missoula Offices
Ev and Margaret Lundgren
Flathead Basin Commission
Flathead National Forest
Fred Matt, Chair, Confederated Salish and Kootenai Tribal Council
Friends of the Wild Swan
Glacier County Commissioners
Glacier Natural History Association
Glacier Raft Company
Great Northern Whitewater Resort
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John Case
Joyce Spoonhunter, Blackfeet Tribal Cultural Liaison
Judy Martz, Governor of Montana
Steve Martin, Regional Director, National Park Service, Denver
Max Baucus, United States Senate
Mayor of Browning Montana
Mayors and City Councils of Kalispell, Columbia Falls, and Whitefish
Montana Department of Environmental Quality Permitting & Compliance, Helena
Montana Department of Environmental Quality, Board of Environmental Review
Montana Department of Environmental Quality, Water Protection Bureau
Montana Department of Natural Resources and Conservation
Montana Environmental Information Center
Montana Fish, Wildlife, and Parks, Region One Supervisor, Kalispell
Montana Intergovernmental Clearing Office of Budget and Planning
Montana Preservation Alliance
Montana State Clearinghouse
Montana State Historic Preservation Office
Montana Wilderness Association
Mr. and Mrs. Galvin
National Parks Conservation Association
Norman and Jean Adams
Pat and Riley McClelland
Public Libraries: Kalispell, Whitefish, Columbia Falls, Helena, Butte, Browning, Bozeman, Great Falls, Missoula, Bigfork, and Lethbridge, Alberta, Canada
U.S. Army Corps of Engineers
U.S. Environmental Protection Agency
U.S. Fish and Wildlife Service (Helena and Creston)
U.S. Geological Survey, Biological Resources Division
Waterton Lakes National Park
Wilderness Watch
William Talks About, Chairman, Blackfeet Tribal Business Council

Summary of Compliance with Federal and State Regulations

National Environmental Policy Act (NEPA) and Regulations of the Council on Environmental Quality – The National Environmental Policy Act applies to major federal actions that may significantly affect the quality of the human environment. This generally includes major construction activities that involve the use of federal lands or facilities, federal funding, or federal authorizations. If the environmental effects are undetermined then an Environmental Assessment is prepared to evaluate potential impacts. This Environmental Assessment meets the requirements of the NEPA and regulations on the Council on Environmental Quality in evaluating potential effects associated with activities on federal lands. If no significant effects are identified a finding of no significant impact (FONSI) would be

prepared. If significant impacts are identified, then a notice of intent (NOI) would be filed for preparation of an Environmental Impact Statement.

The Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) – Section 7 of the Endangered Species Act is designed to ensure that any action authorized, funded, or carried out by a federal agency likely would not jeopardize the continued existence of any endangered or threatened plant or animal species. If a federal action may affect threatened or endangered species, then consultation with the U.S. Fish and Wildlife Service is required. The project area is not known to be used by any federally-listed species; therefore, the park has determined that there will be no effect to federally listed species. The US Fish and Wildlife Service will receive a copy of this EA and notification of our determination. Further consultation is not necessary.

Executive Order 11990, Protection of Wetlands-No wetlands would be affected by the No action alternative or the Preferred Alternative according to the USFWS (1992) National Wetland Inventory Mapping.

National Historic Preservation Act of 1996, as amended (16 U.S.C. 470, et Seq.) – Section 106 of the National Historic Preservation Act of 1966 (as amended) requires federal agencies to consider effects of any federal action on cultural resources eligible for or listed in the National Register of Historic Places (NHRP), prior to initiating such actions. In accordance with the regulations, Glacier National Park has determined that there are no cultural resources eligible for or listed in the National Register within the area of potential effect. Glacier National Park, the Advisory Council on Historic Preservation, and the Montana State Historic Preservation Officer (SHPO) have executed a Programmatic Agreement (PA) for the management of historic properties in the park. The Agreement outlines procedures for complying with Section 106 identification and evaluation and findings of effect in defined instances. The proposed project falls under the Programmatic Agreement, and no further Section 106 review is required. Glacier National Park prepares an annual report to the SHPO that lists the activities carried out under the terms of the PA. This project will be documented in the park's FY04 annual report.

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